

IN THE CLAIMS

Please amend the following claims.

1-10. (Canceled)

11. (Currently amended) An apparatus for atmospheric and sub-atmospheric processing of a wafer comprising:

an atmospheric transfer chamber having first a wafer handler contained therein;

a wet cleaning module coupled to said atmospheric transfer chamber;

a sub-atmospheric transfer chamber having a second wafer handler contained therein;

a first load lock coupled to said sub-atmospheric transfer chamber and to said atmospheric transfer chamber;

an integrated particle monitoring module for monitoring particles on a wafer surface coupled to said atmospheric transfer chamber, wherein said integrated particle monitoring module comprises a laser source for shining a laser beam incident on a water surface and a plurality of detectors for detecting the reflection of said laser beam from said wafer surface to indicate the presence of defects on said wafer surface;

a first sub-atmospheric processing module coupled to said sub-atmospheric transfer chamber wherein said sub-atmospheric module is selected from the group consisting of a CVD deposition module, a sputter module, an oxidation module, an etch module and an anneal module; and

a controller for controlling said wet cleaning module and said integrated partial member module wherein said controller includes stored instructions for determining

the operation of said wet cleaning module depending upon results in said integrated particle monitoring tool.

12. (Canceled)

13. (Canceled)

14. (Original) The apparatus of claim 11 further comprising a second load lock coupled between said atmospheric transfer chamber and said sub-atmospheric transfer chamber.

15. (Original) The apparatus of claim 14 wherein said first and said second load locks are single wafer load locks.

16. (Original) The apparatus of claim 11 further comprising, a wafer cassette coupled to said atmospheric transfer chamber for providing wafers to be loaded into said atmospheric transfer chamber.

17. (Canceled)

18. (Currently Amended) An apparatus for etching and cleaning a wafer comprising:

an atmospheric transfer chamber having a first wafer handler contained therein;

a sub-atmospheric transfer chamber having a second wafer handler contained therein;

a first load lock coupled to said sub-atmospheric transfer chamber and to said atmospheric transfer chamber;

a single wafer wet cleaning module directly coupled to said atmospheric transfer chamber;

a etch module couple to said sub-atmospheric transfer chamber;

an integrated particle monitoring tool for monitoring particles on a ☐ wafer surface coupled to said atmospheric transfer, wherein said integrated particle monitoring tool comprises a laser source for shining a laser beam incident on a water surface and a plurality of detectors for detecting the reflection of said laser beam from said wafer surface to indicate the presence of defects on said wafer surface; and

a controller for controlling said wet cleaning module wherein said controller includes stored instructions for determining the operation of said wet cleaning module depending upon results in said integrated particle monitoring tool.

19. (Canceled)

20. (Original) The apparatus of claim 18 further comprising an ashing module coupled to said atmospheric transfer chamber.

21. (Original) The apparatus of claim 18 further comprising a CD measurement tool coupled said atmospheric transfer chamber.

22. (Original) The apparatus of claim 20 further comprising a second ashing module coupled to said atmospheric transfer chamber.

23. (Original) The apparatus of claim 18 further comprising a second etch module coupled to said sub-atmospheric transfer chamber.

24. (Previously amended) The apparatus of claim 18 wherein said controller controls said ashing module and includes stored instructions for determining the operation of said ashing module depending upon results in said integrated particle monitoring tool.

25. (Original) The apparatus of claim 21 further comprising a controller for controlling the operation of said critical dimension monitoring tool and for controlling the operation of said etch module and wherein said computer includes stored information for controlling the operation of said etch module depending upon measurement taken by said critical dimension monitoring tool.

26-43. (Canceled)

44. (Currently amended) An apparatus for the formation of an electrode comprising:

- an atmospheric transfer chamber having a first wafer handler contained therein;
- a sub-atmospheric transfer chamber having a second wafer handler contained therein;
- a first load lock coupled to said sub-atmospheric transfer chamber and to said atmospheric transfer chamber;
- a wet cleaning module coupled to said atmospheric transfer chamber;
- a single wafer thermal process module coupled to said sub-atmospheric transfer chamber;
- a polysilicon deposition module coupled to said sub-atmospheric transfer chamber; and

an integrated thickness measurement tool coupled to said atmospheric transfer chamber; and

an integrated particle monitoring module for monitoring particles on a wafer surface coupled to said atmospheric transfer chamber, wherein said integrated particle monitoring module comprises a laser source for shining a laser beam incident on a wafer surface and a plurality of detectors for detecting the reflection of said laser beam from said wafer surface to indicate the presence of defects on said wafer surface; and

a computer controller for controlling said silicon deposition chamber, said thermal process chamber and said single wafer wet cleaning chamber, and said controller storing operation parameters for the operation of said wet cleaning module depending upon results from a measure taken in the integrated particle monitoring tool.

45. (Original) The apparatus of claim 44 further comprising an integrated particle monitoring tool coupled to said atmospheric transfer chamber.

46. (Canceled)

47. (Canceled)

48. (Original) The apparatus of claim 44 further comprising a second single wafer thermal process module coupled to said sub-atmospheric transfer chamber.

49. (Original) The apparatus of claim 44 further comprising a second load lock coupled to said atmospheric transfer chamber and to said sub-atmospheric transfer chamber.

50. (Canceled)

51. (Previously Amended) The apparatus of claim 44 further comprising a computer for controlling the operation of said thermal process chamber, and said polysilicon deposition chamber and wherein said controller stores information for determining the process parameters of said polysilicon deposition chamber and/or said thermal oxidation chamber depending upon results measured in said integrated thickness measuring tool.

52-79. Canceled